OCT 3 1 2011

## FCC Mail Room



## **Board of Commissioners**

Mena Kaehler, Chair

177 Main Street, Winona, Minnesota 55987

www.co.winona.mn.us

Phone: (507) 457-6350

Fax: (507) 454-9365

Date:

October 17, 2011

Senator Al Franken

Received & Inspected

To:

Ms. Marlene Dortch, Secretary, Federal Communications Commission

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Senator Amy Klobuchar Representative Tim Walz State Senator Jeremy Miller State Senator John Howe FCC Mail Room

State Representative Gene Pelowski State Representative Steve Drazkowski

Subject:

Potential Impact of LightSquared 4G Proposal

We are writing to express our concern with LightSquared's proposed "solution" to the harm its wireless broadband initiative would do to the national GPS. We have serious misgivings about the FCC granting LightSquared conditional approval (FCC File No. SAT-MOD-20101118-00239) to push forward with their initiative to build a nationwide 4G-LTE wireless broadband network. According to LightSquared's own report, most High Precision GPS devices would be rendered useless by LightSquared's actions. These are the very devices that surveyors around the country use every day.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared LLC Company to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

Winona County is a small, rural county in Southeast Minnesota and has, like most counties in the State, invested a large sum of money into Precision GPS equipment over the past 15 years. The County Surveyor's office alone has invested over \$100,000 in Precision GPS units. These units allow efficient surveying and significant cost savings, especially in our wooded hilly topography. The proposed LightSquared 4G proposal will render this equipment useless as the interference will not allow the presently owned equipment to be able to receive the satellite signals. Adjacent counties in Southeastern Minnesota have similar Precision GPS units. We are deeply concerned about the potential impact of the proposed LightSquared 4G network and how it will affect our current GPS operations.

Loss of precision GPS capability will require not only the County Surveyor and County Engineer, but also the Private Surveyors to revert to older, about 1990, more labor intensive methods of conducting Property surveys, topo surveys, right-of-way platting and staking, and construction projects. To return to the older conventional surveying equipment would not only mean additional cost to purchase equipment to replace the precision GPS, it will also substantially increase labor costs. In a county with great relief like Winona County, we could see a need for additional personnel and longer delivery times. This will do little to allay public concerns and perceptions about the inefficiency of government agencies.

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The Winona County Surveyor has used precision GPS since 1996 with great success. We have built a complete horizontal (NAD 83) and vertical (NAVD 88) monuments control network throughout our County, of which all of our GIS mapping, County Highway design and staking, public & private land surveys, and Elevation Certifications are tied too.

Agriculture is another big user of high-precision GPS in Winona County. The recent advances in farming equipment use GPS and will not be able to receive the satellite signals.

For these reasons, we believe the implementation of LightSquared proposed 4G network should be delayed until it can be successfully demonstrated that the proposed network will not negatively impact the precision GPS segment of the communications spectrum that has been used in Southeastern Minnesota for nearly twenty years.

Sincerely,

Mena Kaehler, Chair Winona County Board